DOCUMENT RESUME

ED 224 954 CE 034 729

AUTHOR Ianacone, Robert N.; And Others
TITLE Vocational Education for the Handicapped: Perspectives on Vocational Assessment. Personnel Development Series: Document 7.
INSTITUTION Illinois Univ., Urbana. Leadership Training Inst./Vocational and Special Education.
SPONS AGENCY Office of Special Education and Rehabilitative Services (ED), Washington, DC. Div. of Personnel Preparation.
PUB DATE May 82
GRANT G007900952
NOTE 87p.; For related documents see ED 211 720, CE 034 699-700, and CE 034 726-730.
PUB TYPE Guides - Non-Classroom Use (055) -- Information Analyses (070) -- Reports - Descriptive (141)

EDRS PRICE MF01/PC04 Plus Postage.
DESCRIPTORS Demonstration Programs; *Disabilities; Educational Needs; Experiential Learning; Faculty Development; Federal Legislation; Guidelines; Higher Education; Inservice Education; Inservice Teacher Education; Postsecondary Education; Secondary Education; *Special Education Teachers; *Staff Development; *Vocational Education

ABSTRACT

This document is a monograph in a personnel development series addressing issues that are pertinent for policy-making personnel concerned with vocational assessment by teachers and administrators of vocational and special education. Section 1 addresses the state of the art in personnel preparation and vocational assessment and includes five articles focusing on the literature. These articles relate to personnel preparation and vocational assessment through special education, legislative policies affecting vocational assessment, trends in vocational/special education assessment, issues and concerns of school-based vocational assessment, and facilitation of the assessment process. Section 2 suggests guidelines for personnel development. It considers the changing roles and personnel training needs in vocational/special education assessment and competency areas necessary to conduct career/vocational assessment and evaluation activities. Section 3 suggests three areas of strategies for personnel development that need to be integrated into a conceptual training framework to ensure success in vocational/special education assessment training: classroom-based considerations, field-based considerations, and alternative sites for vocational assessment experiences. Section 4 delineates two exemplary models for the delivery of vocational assessment services. Appendixes include vocational assessment materials. (YLB)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

ED224954

Vocational Education for the Handicapped: Perspectives on Vocational Assessment

Personnel Development Series: Document 7

Edited by

Janet M. Treichel
Office of Career Development for Special Populations
University of Illinois at Urbana-Champaign

Contributing Authors

Robert N. Ianacone
Alain E. C. Hunter
Dorothea M. Hiltenbrand
George Washington University

Jane A. Razeghi
American Coalition of Citizens with Disabilities

Robert A. Stodden
University of Hawaii

William F. Sullivan
Arlington, Virginia Public Schools

Lois R. Rothkopf
Montgomery County, Maryland Public Schools

A Publication of the
LEADERSHIP TRAINING INSTITUTE/
VOCATIONAL AND SPECIAL EDUCATION

Office of Career Development for Special Populations
College of Education
University of Illinois at Urbana-Champaign

Sponsored by

Division of Personnel Preparation
Office of Special Education
U.S. Department of Education

U.S. DEPARTMENT OF EDUCATION
NATIONAL INSTITUTE OF EDUCATION
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

This document has been reproduced as received from the person or organization originating it.

☐ Minor changes have been made to improve reproduction quality.

• Points of view or opinions stated in this document do not necessarily represent official NIE position or policy.

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY

J. Treichel

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

CE034729

May 1982

FOREWORD

Over the past decade the problems and difficulties that face handicapped youth in their efforts to obtain and maintain employment have been widely documented by researchers, public policy analysts, and advocacy organizations. In the 1970s the U.S. Congress enacted several pieces of education, training, and employment legislation to focus, in part, on resolving these problems. The Education for All Handicapped Children Act of 1975, along with the Vocational Education Amendments of 1976, the Comprehensive Employment and Training Act of 1978, and several civil rights initiatives, placed priority upon assuring that handicapped youth receive appropriate vocational education programs and services. These various pieces of legislation acknowledged the concurrent need for staff development and teacher education programs to assure that effective programs and services are delivered. Within the vocational education, special education, rehabilitation, and CETA systems there are nearly a million professionals--the vast majority of whom have limited or no expertise in planning and providing comprehensive vocational programs and services for disabled youth and adults. The need for training programs to update teachers, support personnel, counselors, coordinators, and administrators is great. There is also an enormous need for training other individuals (such as employers, parents, advocates, co-workers, non-disabled peers) if youths with special needs are to be successful in their transition from school to work.

Planning and conducting effective personnel development programs that serve the career development needs of handicapped youth involves a variety of complex tasks. Developing appropriate interagency, collaborative training arrangements is essential to insure that current knowledge and expertise is

utilized from the fields of vocational education, special education, rehabilitation, career development, and employment and training. Decisions must be made relative to the specific training needs of the target audience. Frequently, the needs of inservice practitioners must be considered along with the needs of trainees who are preparing to enter the field for the first time. The question of student needs is also present. The process of providing vocational education for severely handicapped youths is, by nature of the students served and the training technology, considerably different from training mildly handicapped youth. Other critical dimensions related to the content of personnel development encompass such areas as: vocational assessment, career guidance, and evaluation of training programs. The need for and patterns of personnel certification in the field of vocational/special education is also a continuing concern for personnel development programs.

During 1980-82 the University of Illinois hosted a series of three conferences which focused upon improving personnel preparation programs in vocational/special education. These conferences were conducted as part of the Leadership Training Institute/Vocational and Special Education, which was supported by a grant from the Division of Personnel Preparation, Special Education Programs, U.S. Department of Education. As individuals responsible for personnel preparation programs in vocational/special education met and shared their experiences and concerns, a clear need emerged for a series of monographs on designing, implementing, and evaluating personnel development programs. The need to address the critical questions and identify effective policies and practices related to personnel development was obvious following the initial conference held in Champaign, Illinois in April 1980. The project staff used a small advisory group of individuals attending the conferences to outline the Perspectives monograph series. Needs assessment data

collected during and prior to the first conference was used by the group in identifying the major topics to be addressed in the series. Staff involved in the vocational/career education projects funded by the Division of Personnel Preparation were then invited to become members of the various monograph writing teams. Under the expert guidance of Dr. Janet Treichel, LTI Training and Dissemination Coordinator, the writing teams formulated their monographs to focus on such core components as: present state-of-the-art, effective policies and practices, and guidelines for personnel development programs. Dr. Treichel coordinated the planning and preparation of the series in a highly exemplary manner. Her leadership, commitment to excellence, and professional insight were valuable assets in editing this series.

The monograph topics in the Perspectives on Personnel Development series include: Special Populations/Severely and Moderately Handicapped, Certification, Program Evaluation, Effective Interagency/Interdepartmental Coordination, Inservice Personnel Development, Vocational Assessment, Preservice Personnel Preparation, and Career Development/Guidance.

We anticipate that the monographs will be useful resource documents for a variety of audiences. Teacher educators and administrators in higher education will find the series helpful in planning both preservice and inservice programs for special educators, vocational educators, counselors, educational administrators, rehabilitation specialists, and others. State education agencies involved in certification, personnel development, and program administration will find strategies, and suggestions for reviewing, evaluating, and formulating teacher training efforts in local agencies and universities. The monographs are also a rich source of ideas for parent and advocacy groups and professional associations as they seek to improve the knowledge and competence of personnel serving handicapped youth.

This series represents a significant compilation of important and timely perspectives on personnel development in vocational/special education. It contains the wisdom and insight of nearly 50 leaders in the field. We feel it will be a valuable and important resource in improving the "appropriateness" of the programs and services received by the handicapped youths of our nation.

L. Allen Phelps
Director
Leadership Training Institute/
Vocational and Special Education

George Hagerty
Project Officer
Division of Personnel Preparation
U.S. Department of Education

PREFACE

The Perspectives on Personnel Development series has become a reality due to the efforts of a number of individuals. These people were highly instrumental in the development, planning, and publication phases of the monographs.

Appreciation and gratitude is extended posthumously to Margaret (Meg) Hensel. Meg was actively involved in assisting in planning for the personnel preparation conferences and the initial developmental stages for this series. We will continue to miss her enthusiasm and dedicated efforts.

The LTI is indebted to Robert N. Ianacone, Alain E. C. Hunter, and Dorothea M. Hiltenbrand, George Washington University, Jane Razeghi, the Americian Coalition of Citizens with Disabilities; Robert Stodden, University of Hawaii; William Sullivan, Arlngton Virginia Public Schools; and Lois R. Rothkopf, Montgomery County, Maryland Public Schools, for their excellent work in developing this monograph. This document addresses a number of issues that are pertinent for policy-making personnel concerned with vocational assessment.

The reviewers for the Perspectives series also made important and significant contributions. Dr. Gary Clark of the University of Kansas reviewed each monograph in the series. Dr. Ron Fry of the University of Wisconsin-Stout and Mr. Brian Cobb of the University of Illinois at Urbana-Champagin served as reviewers for the Perspectives on Vocational Assessment monograph. Their insightful comments and suggestions were very helpful in the preparation of the monograph.

Sincere appreciation is expressed to Ms. Alicia Bollman, Ms. Lilian Del Barco and Ms. June Chambliss for their dedicated efforts and patience in providing the secretarial expertise necessary to produce this volume.

Janet Treichel, Editor
Coordinator, Training and Dissemination
Leadership Training Institute/
Vocational and Special Education

Contents

	Page
STATE OF THE ART	1
Review of Literature Relating Personnel Preparation and Vocational Assessment Through Special Education	1
Existing Legislative Policies Which Affect Vocational Assessment	2
By Jane A. Razeghi	
Recent Trends in Vocational/Special Education Assessment	7
Issues and Concerns of School-Based Vocational Assessment	10
Facilitating the Assessment Process	16
By Robert N. Ianacone and Dorothea M. Hiltenbrand	
SUGGESTED GUIDELINES FOR PERSONNEL DEVELOPMENT	19
Changing Roles and Personnel Training Needs in Vocational/Special Education	19
Interdisciplinary Competencies in Vocational/Special Education Assessment	22
By Robert A. Stodden	
SUGGESTED STRATEGIES FOR PERSONNEL DEVELOPMENT	26
Overview	26
Classroom-Based Considerations	27
By Robert N. Ianacone	
Field-Based Considerations	35
By Dorothea M. Hiltenbrand	
Alternate Sites and Techniques for Vocational/Special Education Assessment	41
By Alain E. C. Hunter	
MODEL DELIVERY OF VOCATIONAL ASSESSMENT SERVICES	46
Arlington Career Center Vocational Assessment Center/Process	46
By William F. Sullivan	
Montgomery County Public Schools Classroom-Based Vocational Preassessment Program	52
By Lois R. Rothkopf	

Page

SUMMARY 62

REFERENCES 63

APPENDICES 67

Appendix A. Evaluation Summary: Vocational Assessment Profile 68

Appendix B. Suggested Prevocational, Vocational, and Career Recommendations 70

Appendix C. Advantages and Disadvantages of Using Major Commercial Systems With Individuals Who Are Handicapped 73

State of the Art

With the current interest and emphasis on preparing disabled individuals for meaningful employment, vocational assessment is emerging as a new field for teachers and administrators of vocational and special education. Unfortunately, very few of these individuals have received any training in vocational assessment in their preservice preparation. As a result, few educators in the public schools have knowledge or understanding of the role that vocational assessment can play in the life of a disabled individual. It is with this tremendous need for information in mind that this monograph is written.

Review of Literature Relating Personnel Preparation and Vocational Assessment Through Special Education

By Jane A. Razeghi

Despite the fact that federal regulations for both vocational education and special education mandate states to provide personnel preparation, a review of the current literature reveals that there is little or nothing available which attempts to relate personnel preparation and vocational assessment through special education. It should be noted that the Education Amendments of 1976 (P.L. 94-482) specified handicapped and disadvantaged students as priority foci in the personnel training section, and the Education of All Handicapped Children (P.L. 94-142) required states to establish a comprehensive system of personnel development which focuses on both preservice and inservice training needs.

Unfortunately, the quality of the above programs is difficult to assess because little actual information or literature is available about them. Although a 1979 report by the Department of Health, Education, and Welfare to

Congress indicated that states do have some major training efforts underway, the report also indicated that these personnel preparation programs may be inadequate to meet the needs which exist. In reviewing the products of two Office of Special Education (OSE) funded projects (National Inservice Network, 1981, and the Leadership Training Institute/Vocational and Special Education, 1980), it was quickly evident that only a few personnel preparation projects are primarily concerned with relating personnel preparation and vocational assessment through special education.

The University of Wisconsin/Stout, Auburn University, and the University of Arizona are the three major universities granting degrees in vocational evaluation, but they are not geared toward the area of special education. Two programs which do include a vocational evaluation component as part of their requirements in training vocational/special educators are the Vocational/Special Education Graduate Program at George Washington University and the Counseling Personnel Services Program (CAPS) at the University of Missouri/Columbia.

Thus, currently the state of the art reveals that:

- o There are few personnel preparation programs which address the need for preparing vocational/special educators in the area of vocational assessment, and
- o There has been little evaluation of the effectiveness of the training programs which do exist.

Existing Legislation and Policies Which Effect Vocational Assessment

by Jane A. Razeghi

Vocational assessment can be a very controversial subject. Because it can often be the determining factor in a career choice, it can become a tremendously important issue where handicapped individuals are concerned.

When the employment and training statistics are reviewed, it becomes evident that handicapped individuals are disproportionately underrepresented in the nation's workforce as well as in the major education, training, and employment programs designed to assist individuals in gaining access to the world of work.

Employment

- Only 40 percent of the adult disabled population is employed as compared to 74 percent of tne nondisabled population (Levitan, S. & Taggart, T., 1976)
- 85 percent of those disabled individuals employed earn less than $7,000 per year and 52 percent earn less than $2,000 per year (Bowe, 1980)
- 50 percent of all U. S. residents who do not participate in the labor force are disabled (Bowe, 1980)
- 76 percent of all disabled women are unemployed (Bowe, 1980)

Training

- Handicapped individuals represented only 2.1 percent of the total fiscal year 1978 enrollments in secondary vocational education programs and 1.7 percent of the postsecondary enrollments (Office of Civil Rights, 1980)
- FY 1978 enrollment data from the U.S. Department of Labor indicated that handicapped youth represented less than 5 percent of the participants in CETA youth programs (Jones, R., 1977)

It has been argued that some of the major barriers to the above programs are the entrance and eligibility requirements. It seems evident that vocational assessment might play a substantial role in reducing these barriers.

One of the most significant contributions to the elimination of discrimination in admission practices of public institutions delivering occupational education is the Office of Civil Rights (OCR) Final Guidelines, published March 21, 1979. They represent a capstone to the civil rights movement of the 1960s. One of the major purposes of the OCR guidelines was to change the vocational guidance practices which have evolved since the 1900s (Kapes & Greenwood, 1979). These guidelines were derived from and provide supplemental guidance to Title VI of the Civil Rights Act of 1964 (P.L. 88-352), Title IX of the Education Amendments of 1972 (P.L. 92-318), and Section 504 of the Rehabilitation Act of 1973 (P.L. 93-112). Although the OCR guidelines were created to eliminate discrimination and denial of services in vocational education programs on the basis of race, color, national origin, sex, and handicapping condition, they also provide a significant impact in the area of vocational assessment (Tesolowski & Wichowski, 1981).

The OCR regulations state that academic performance, record of disciplinary infractions, counselors' approval, teachers' recommendations, interest inventories, high school diplomas, standardized tests and pre-requisite courses should only be used if they do not disproportionately exclude students. Most of the vocational assessment instruments would come under the classification of standardized tests. Thus, as such, they could not be used to screen a disproportionately high number of students from vocational education on the basis of handicapping condition (Tesolowski & Wichowski, 1981).

Another set of final regulations for Section 504 (Rehabilitation act of 1973, Subject D, 84.34) specified the rules and regulations for evaluation and placement in programs for handicapped individuals. State and local education agencies are required to establish standards and procedures for evaluation and placement for persons who, because of handicap, need or are believed to need special services. These standards must insure the following:

1. Tests are validated for the specific purpose for which they are used;
2. Tests are administered by trained personnel in accordance with the instructions provided by the producer of the tests;
3. Tests include those designed to assess specific areas of educational needs and not merely those providing a general I.Q. score; and
4. Tests are to reflect the student's achievement levels or aptitudes, not merely the effect of impairments.

These guidelines for state and local standards also apply to vocational assessment instruments and systems (Howard, 1980). Both the competency of the personnel administering such tests, and the nature of the tests themselves are covered by Section 504.

Still other final regulations for Public Law 94-142, Subpart E, 121a.532, mandate more specific procedural safeguards in the evaluation procedures for the diagnosis, labeling, and educational placement of children with handicaps. Specific assessment procedures must insure the following:

1. Tests are to be administered in the student's primary mode of communication;
2. Tests must have been validated for the specific purpose for which they are being used;
3. Tests must be administered by trained personnel;
4. Tests are to be administered in accordance with the instructions provided by the producer(s) of the tests;
5. Tests are to be free from racial or cultural bias;
6. Tests are to measure what they claim to measure rather than merely reflecting the restricting effect of the handicap;

7. No single test or procedure is to be used as the sole criterion for decision-making;
8. Decisions must involve a multi-disciplinary evaluation team including at least one teacher or specialist in the area of the suspected disability;
9. Tests used are to include those designed to assess specific areas of need, not merely providing a general I.Q. score;
10. All areas related to the suspect disability are to be evaluated; and
11. A written report of the evaluation is to be prepared by the evaluation team.

The above evaluations are to be continued at least every three years for each student who is the recipient of special education and/or related services.

All of the regulations for the OCR guidelines, Section 504, and P.L. 94-142 are worded in a way that often makes their implementation inconsistent and their enforcement difficult. There are many variables:

- o The specific definitions used,
- o Assessment measures and procedures chosen,
- o The role and degrees of training of the various professionals involved in the evaluation process, and
- o The propriety of the evaluation instrument relative to the actual disability of the student being tested.

All of these variables may result in some degree of bias. Unfortunately, there seems to be a lack of awareness by both producers of the evaluation instruments and many professionals administering them regarding the potential areas of bias in the assessment process and how these actually influence decision making. It seems crucial for effective and legal implementation of all the federal mandates that professional awareness and sensitivity to these

issues be strongly emphasized at all levels of preservice and inservice teacher preparation, special education provision, and selection and use of assessment instruments.

Some of the recent trends in vocational/special education assessment are reflective of the legislative policies and implications just discussed, as well as the critical needs of service providers for the provision of appropriate vocational/special education assessment to secondary level handicapped youth. The following discussion will address some of these trends.

Recent Trends in Vocational/Special Education Assessment

by Robert N. Ianacone and Dorothea M. Hiltenbrand

Vocational assessment, a long time hallmark of vocational rehabilitation, has filtered down to the school level focusing on younger "clients" in an attempt to meet the career needs of handicapped adolescents. There is a great deal of conjecture about what factors have created this trend. Some say it is a direct result of vocational rehabilitation's inability to service all of those who need and qualify for service (Bowe, 1980). Others attribute this trend to changes in rehabilitation's emphasis on the type of client served, program accountability related to case closures, and resulting funding patterns which have forced rehabilitation out of the schools (Stodden & Ianacone, 1981). All of these factors contain some degree of truth and justification in terms of the present service delivery structure, but the often overlooked reason for this trend relates to differences in need and purpose. The essence of this difference reverts back to the basic intent and structure of the vocational assessment process.

Vocational assessment at the school level should systematically utilize preparation for work, real or simulated, as a focal point for vocational assessment and exploration in vocational development. This focus relates to the

difference in service emphasis between rehabilitation and special education. "Rehabilitative services are designed to restore a person's productive capacity or his ability to manage his own affairs in part or entirely as he had previous to his incapacity" (Conley, 1974, p. 71). Education or rehabilitative services are designed to initially provide developmentally sequenced instruction which will enable a person to reach his/her productive capacity or ability to manage his/her own affairs. Vocational assessment at the public school level is probably most frequently aligned with the latter.

A majority of the vocational assessment at the school level has focused on the high school student who is close to graduation (Stodden, 1980). This trend has met a need of the country to address the needs of students who are nearing the end of their school involvement and still lacking a sense of career direction. This response presents some problems. It is quite optimistic to expect a "single instance evaluation," late in the student's school career, to make a significant impact on career aspirations and direction. The students who enter these evaluations vary in background but frequently experience a low degree of career awareness and exploration. They quite often lack the appropriate readiness skills and behaviors to maximally benefit from the vocational assessment. This reflects the school's failure (grades K through 12) to provide and infuse career education into the educational process. Emphasis should be placed on structuring activities early in the student's schooling which will facilitate an individual's personal and occupational awareness, exploration, and understanding, as well as provide general occupational cluster information regarding work values, interests, and entry level behaviors and skills. Important readiness behaviors and skills include awareness, exploration, and understanding of the role of work in our society and the general behavior and skill requirements necessary for participation in that

role. A key ingredient of the readiness component is student involvement in the program formulation to the extent that he/she can understand and internalize his/her own needs and participate in decision making.

The outcome of this pre-vocational readiness component should be a student who is aware of, has explored, and understands his/her own needs, interests, and present abilities and limitations in relation to available occupational options. Having reached the decision-making point, the student is ready to proceed toward an indepth work role exploration and assessment (Stodden & Ianacone, 1981). This assessment process, then, becomes more than a collection of product data and is viewed as an integral part of the student's long term career development process (Sitlington, 1980).

The assessor most importantly must collect data which contributes to the career development process and is related to community opportunities. The students and sending teachers must not end up with the attitude that vocational assessment has taken place to/for them. If the vocational assessment process is truly part of the career development process then the assessment and recommendations happen with them in a decision-making milieu. Parents, teachers, and students should be intimately involved in utilizing the assessment process and results in developing and supplementing the development process.

The team of vocational/special/resource personnel, parents, and student must join forces with the assessment staff in pooling information, questioning, interpreting, and sharing judgments in a process of synthesizing and integrating vocational assessment findings, classroom and home observations, etc. This team effort will facilitate the construction of a plan with a specific focus on objectives leading to appropriate placement. The team should be concerned with examining the vocational interests, assets, and limitations and,

then, mapping immediate and long term objectives, with services necessary and responsible persons designated. Once a plan of action has been established it should be incorporated into the individualized education program (IEP), an additional indication of mutual understanding and professional responsibility within the team decision (Sitlington, 1979). Vocational and special educators must determine what support personnel will be required to supplement the training program. The vocational assessment staff should help specify available resources within and without the system and define present funding sources to assist in obtaining professional resource assistance.

When placement is made, responsibility and involvement as a team does not end; rather, the placement is productive only if (a) it is translated into specific educational and teaching strategies meeting individual learning styles, and (b) those involved will modify the instruction to meet the needs identified in the assessment report (Razeghi, 1981).

Issues and Concerns of School-Based Vocational Assessment

by Robert N. Ianacone and Dorothea M. Hiltenbrand

There have been a number of difficulties associated with the operation of school-based vocational assessment centers. These difficulties stem from three major sources. First, there is a lack of expertise in the area of vocational assessment at the school level. For example, special education's expertise lies in the realm of academic testing for placement and programming purposes. Vocational education, on the other hand, relies on an informal and sometime competency-based assessment process depending on an individual teacher's needs and subject area. The concern is more related to skill attainment and successful entry into the labor force. Vocational rehabilitation, the probable source of the greatest information, is considered apart from the

problem (i.e., an after school resource). In general, there is a lack of understanding about rehabilitation's role. The provision of rehabilitative services has become far removed from the school system because of a changing focus and interdisciplinary efforts which are rarely in place and have seldom been effective.

Each of these disciplines has critical information and knowledge to share when cooperatively engaging in the vocational assessment process. Special education can contribute testing know-how, developmental programming, and support service skills. Vocational education can supply knowledge about the job market, employment trends, and entry/exist level criteria for successful vocational skill training. Vocational rehabilitation can supply vocational evaluation and job analysis expertise. The difficulty is that time is rarely set aside to bring these critical service providers together to discuss their needs, share their areas of expertise in the development of a school-based vocational assessment process, and delineate how this assessment will integrate into their respective programmatic goals. Ideally, those who are supposed to utilize and benefit most from the vocational assessment process must have a vested interest in the integration, relevance, and programmatic gain of the total assessment process. To efficiently and effectively operationalize this process, service administrators, vocational educators, special educators, counselors, and significant others must internalize or buy into it to make it work. If one does not have the initial involvement and commitment of relevant staff in the development and problem solving aspects of the vocational assessment process, a credibility gap is created which may take a great deal of time and effort to overcome. The vocational assessment process then becomes an additional service instead of an integral part of the career development process for students who are handicapped. Unfortunately, there is usually administrative

pressure, often precipated by legislation or a desire to avoid litigation, to begin the assessment process prematurely. Budgetary and staffing considerations also play a role in this "push." However, it is counterproductive to attempt to satisfy administrative needs at the sacrifice of establishing the necessary groundwork to integrate the vocational assessment process into the service structure.

This initial lack of available expertise at the system level coupled with the paucity of university-level vocational/special education programming translates into a second source of difficulty--that of establishing a philosophical and structural foundation based on school and community needs for the system. When conceptualizing a model for vocational assessment of special needs individuals, it is critical to have a clear understanding of the specific purposes and rationale for the existence and operation of the program (Stodden, 1980). By addressing the following questions, a comprehensive assessment process will more likely be established:

- Why there is a need for the assessment?
- What will specifically be measured?
- How will this information be measured?
- Who will participate in the assessment process?
- How will this individual be referred?
- Where will this assessment activity take place?
- What events or activities will take place?
- What is the sequencing/timing of these events?
- Who will conduct the assessments?
- How will the results be utilized?
- How much will this cost?

The resource vacuum, with which many school systems must grapple, relates to the third major source of difficulty in establishing school-based vocational assessment activities for individuals who are handicapped. Few models exist that are based on a strong programmatic foundation where there is a complete and effective facility within the school system. The school-based vocational assessment models that are presently functioning seem to select components of existing rehabilitation models without consideration or an understanding of their own needs within an educational setting (Stodden, 1980). These problems are compounded by the difficulty of relating findings to programmatic needs and justifying placement decisions on vocational assessment results. As a result, the vocational assessment centers often meet more of an administrative and compliance posture rather than that of a developmental change agent role. School-based vocational assessors often relate that their position carries no "clout" in carrying out recommendations.

There are also a number of other process and organizational concerns that are an outgrowth of the three major difficulties stated. Several will be more fully examined below.

Process Concerns. There is a legitimate concern related to how vocational assessment is viewed. Often administrators view the assessment process as meeting the total career needs of an individual who is handicapped. "Now you know what you can do; the obligation is met; let's get back to meeting graduation requirements." The special educator often views the vocational assessment process as a replacement for career exploration. "Now you know what you want to do; the obligation is met; let's get back to learning functional life skills or remediating academic skills--you're two weeks behind already!" The vocational educator often views the vocational assessment as meeting vocational education's obligation to providing access to the

world of work. "Now you know what you want to do; the obligation is met; let me get back to the kids who can really make it." All of these responses reflect only a portion of the feedback but could be avoided, or lessened, if expectations were established in the beginning and these individuals were brought into the development of the vocational assessment process.

Another process concern involves assessment materials and staffing considerations. A number of the commercial systems are not specifically designed for the handicapped and often need modification and adjustment to help obtain unbiased assessment results (Stodden, Casale & Schwartz, 1977; Stodden, Ianacone & Lazar, 1979). There has been a great deal of concern regarding the appropriateness of the norms and scoring procedures. Many of the samples are one trial samples which offer little opportunity to develop alternative strategies to perform the task. In addition to these operational concerns, many of the commercial systems have to be purchased as a complete package. The result is that pieces of various systems are utilized in an attempt to best reflect the local labor market. This creates a sizable waste of funds since the unused portion of the system may then be stored and seldom used. There has been a trend to develop individual work samples which can be specifically tailored to local training and employment opportunities. Additionally, there has been an effort to focus the evaluation process as close as possible to the work setting. Increased emphasis has been placed upon the use of the vocational classroom and employment situations as assessment sites (Brolin, 1976).

One final consideration is that of staffing. There is a need to recognize that the skills and experiences of the vocational evaluator are of extreme importance in determining the success of a school-based assessment center.

This person should be able to research local labor needs, have intimate knowledge of vocational course offerings, communicate programmatic needs and concerns of the handicapped, be competent in vocational assessment, develop work samples based on detailed task analysis, and be able to perform many other duties related to effective operation of the vocational assessment center. Much depends upon the competence and experience of the evaluator. The selection of a person trained in vocational/special education is certainly a critical element.

Organizational concerns. The origin and development of a program predetermines, to a great degree, the ultimate success of the program. All too often, funds are suddenly available at the end of a funding cycle which must immediately be spent and a vocational assessment system quickly becomes a logical means to expend those funds. Commercial systems offer a quick and easy avenue to spend a large sum of money and often the best salesperson or fortuitous timing, rather than careful consideration, will determine how assessment monies are spent. Initiating a vocational assessment center predicated solely on funding expenditure deadlines increases the likelihood of program failure. Materials or systems often do not reflect the local labor market or vocational offerings. As a result, the purpose and intent of the assessment process often becomes reactive to those systems and materials that are immediately available. The evaluator must then sell the system(s), possibly a system he is not comfortable with philosophically, to staff and students. There are a multitude of problems in securing involvement and support when the staff feels that the assessment process was thrust upon them.

Presently, there are a number of ways to approach the vocational assessment needs of individuals who are handicapped. The most valid approach

involves the development of individual work samples or "on-site" assessment processes based on the combined needs of the student and the community. A majority of presently available commercial systems fall short of addressing the specific needs of the community while at the same time effectively dealing with the special concerns and capabilities of the handicapped population. The vocational assessor must be skilled in making these modifications and in integrating or combining the commercially available assessment materials with locally developed, geographically related materials. Thus, one major difficulty lies with finding an individual who is able to take charge of developing these relationships, create reflective sampling materials that are commensurate with local employment needs, and act in a liaison capacity to insure the effective utilization of assessment findings. Personnel preparation programs are not presently addressing the training of these types of professionals.

Finally, there may also be administrative pressure to overutilize the assessment system once it has been established. It seems that once large amounts of money have been spent on materials, systems, and personnel, pressures exist to immediately start up and to filter as many students through the program as possible, regardless of essential start-up time and the effect on program quality. The authors agree that the assessment center should be cost effective but not at the expense of undercutting the effectiveness and intent of the center.

Facilitating the Assessment Process

by Robert N. Ianacone and Dorothea M. Hiltenbrand

Vocational assessment, as an integral component in the total educational and career development program for a student who is handicapped, demands involvement, commitment, interaction, and the expertise of many professionals.

Vocational assessment is not a service alone, but rather is a "comprehensive process involving an interdisciplinary team approach to assessing an individual's vocational potentials, training, and placement needs" (Brolin, 1976, p. 81).

Often, the vocational assessment process has been expected to supply the solution to the many problems and questions educators, parents, and students postulate about a vocational/career direction. We tend to view the vocational assessment team as the information-gathering analyst and decision-maker, holding the ultimate vocational and educational future of the student within the framework of a final report. This is a fallacy. Within the sphere of the vocational assessment model exist the tools and the opportunity to collect an abundance of information at a central point that will assist in, rather than solely determine, the career decision-making process.

Developmental Cooperation and Commitment. For the vocational assessment team to effectively and efficiently devise and implement recommendations into an active operative plan, vocational and special education personnel must be invited to become interactive ingredients within the process. Their participation and involvement will help to insure that the vocational assessment goals will be planned and organized into an appropriate and systematic continuum of services which meet the career needs of the handicapped students. The most effective means of creating support and utilizing the skills of vocational and special educators is to include them in the development of the assessment process and organization of the assessment site. Incorporating special and vocational involvement at this point will serve not only to initiate communication and commitment, but more importantly will assure a productive assessment unit that meets the needs of the population and community being served, while intensifying the overall potential and capabilities of the vocational assessment process.

In order to foster this interactive power, the vocational assessment team must create an atmosphere of involvement and commitment in the first stages of the assessment program so that vocational and special education personnel become a part of the process (i.e., they have a stake in its success). Initial involvement should focus on information sharing relative to possible problem areas or areas of concern in location and conceptualization of the functional role of the assessment center.

Although a great many problems exist, one must remember that we are still in the infancy stages of vocational assessment at the school level and we are learning by our mistakes. The aforementioned problems and concerns can all be remedied and/or avoided. The remainder of this monograph will focus on preventive consideration and training competencies related to vocational/special education personnel at the preservice and inservice levels in assessment training.

Suggested Guidelines for Personnel Development

By Robert A. Stodden

Changing Roles and Personnel Training Needs in Vocational/Special Education Assessment

Historically, vocational assessment/evaluation services for handicapped persons have been provided by evaluators with specialized training within the field of vocational rehabilitation. A wide range of competencies have been attributed to the vocational evaluator's role (Coffey, Hansen, Menz, & Coker, 1978) with skill areas falling into broad categories, such as professional background, interacting with other professional workers, initial evaluation procedures, determining vocational direction, analysis and synthesis of evaluation data, communication, adjustment, referrals and placement, and administration. Many of the competency areas are reflective of the vocational evaluator's needs within the traditional rehabilitation process to address the demands of adult clients preparing to return to the world of work. Typical vocational evaluation models include the "center concept" where clients are removed from current programming settings and placed in an evaluation or testing situation. Such operational frameworks require a vast array of related skills on the part of the evaluator. These skills include: defining and accessing referrals, communicating with sending personnel, interpreting past performance data from other disciplines, understanding and communicating with the potential range of receiving persons, and integrating assessment information into formats usable by sending and receiving programmers. Evaluator performance in these related skill areas is often important on such tasks as selection of clients with appropriate readiness skills and behaviors,

and effective interpretation and eventual application of assessment data in client programming.

In recent years the focus of vocational assessment/evaluation activities has expanded to incorporate the career development needs of persons in many different age and ability groupings. Career/vocational assessment models functioning within a developmental career decision-making process, and focusing upon the identification and development of appropriate vocational services begin to address the mandates of current federal legislation and programming needs of handicapped individuals. Stodden, Casale, and Ianacone (1977), Stodden, Ianacone, and Lazar (1979), and Stodden and Ianacone (1981) have advocated for a career/vocational assessment process emphasizing training outcomes assisting the handicapped student's career and educational growth. Such assessment activities are viewed as integrated tasks existing within educational as well as community and rehabilitative structures.

Stodden and Ianacone (1981) discuss the use of a three component model for the career/vocational assessment of handicapped students which is structured within a variety of existing programming environments. The model structure views vocational assessment as a series of developmental learning and data collection events in which the handicapped individual increases awareness and understanding of interactions between the self and the work environment at a general occupational cluster level. Following that, the student formulates an experience base to approach finer level decisions regarding participation on specific tasks, which yields indepth situational exploration and assessment of specific work role satisfaction and performance. The structured collection of data through critical observation of performance on a series of tasks or situations then may yield developmental occupational information assisting the career decision-making process for handicapped

students and persons in roles of planning and managing occupational programming efforts.

According to reports by Stodden (1980), assessment situations may be structured in settings, such as curriculum areas in academic classrooms, industrial arts and vocational shops, resource rooms, work sites within school facilities, and the community. Several educational, human service, and community roles interface in the delivery of educational and career/vocational service to the handicapped individual. These roles are occupied by persons possessing extensive background information about students' functioning patterns, skills, and behaviors. Also, these roles often demand a wide range of learning situations containing tasks and materials that can be structured to yield observable skills and behaviors representative of functions in the world of work. Such participatory roles can include special and regular education teachers, shop instructors, counselors, school and community workers, parents, significant others, and handicapped students themselves.

Stodden (1981) recommends that personnel interested in originating a vocational assessment program conduct a systematic review and role analysis of each discipline which aids in interfacing the assessment and programming process for the handicapped individual. Such an analysis clarifies the types of roles, resources, and competencies possessed within each discipline. The analysis also provides valuable information for redefinition and inservice needs within roles that might fill areas of competency void.

The team involvement of persons interfacing in service delivery can facilitate several outcomes for those concerned with the efficient and valid collection of career/vocational information. Some of the outcomes include (Stodden, 1981):

1. Defining a systematic process for maximizing the use of existing expertise, resources, and facilities to collect career/vocational information;
2. Identifying persons who must access and apply career/vocational information to become participants in the process of collecting that information, thus effecting more appropriate and meaningful application;
3. Restructuring the traditional vocational evaluator's role by dividing some direct and several related skill competencies and behaviors among other disciplines, and thus functioning as a team; and
4. Serving as a systematic process for infusing career development and assessment outcomes into the normal service delivery system, assisting a refocus for educational rehabilitation service providers, as well as contributing to a more appropriate definition of competencies for vocational assessment specialists.

Interdisciplinary competencies in vocational/special education assessment

The remainder of this section consists of a breakdown and listing of competency areas necessary to conduct career/vocational assessment/evaluation activities. The competency areas are categorized according to existing roles within educational and community learning environments that require these skills and knowledge, and can be accessed to develop such resources. These roles have been clustered into four groups according to the commonality of competency that might be provided within the career/vocational assessment process. Competency areas within clusters cannot be necessarily attributed to each role, but might exist within several roles.

CLUSTER I

Roles	Competency Areas
Administrators/Managers (Regular/Special/ Vocational Educators)	-- Conduct school/community environmental search/analysis
	- Delineate the normal service delivery system and program arrangements
	- Identify educational, vocational community and rehabilitative settings
	- Identify school/community resources
	- Describe the career development process
	- Format and organize collected information (written and verbal)
	- Synthesize data into relevant student plans
Counselors/Programmers	- Prepare information for multiple discipline application
	- Incorporate assessment/evaluation procedures (methods, materials and approaches)
Vocational Assessment Specialists/Planners	- Define and structure assessment situations
	- Identify assessment options
	- Construct rating instrumentation
	-- Interpret and evaluate collected information

CLUSTER II

Roles	Competency Areas
Special Educators Regular Educators Industrial Arts Teachers Vocational Trade Instructors Support Personnel (Psychologist, Social Worker, M.D.) Parents	-- Identify characteristics of special need individuals (learner, worker) - Identify the developmental needs of handicapped persons - Determine readiness skill levels possessed by students - Utilize individual programming techniques - Utilize varied methods of accommodation and remediation - Identify prevocational needs and objectives - Utilize task analysis skills - Utilize critical observation skills - Select performance based teaching methods - Incorporate student centered decision-making strategies - Utilize systematic recording methods - Differentiate areas of education and training - Compare student's past performance and functioning patterns - Utilize curriculum development skills - Identify vocational training options - Describe entry level skills and behaviors

CLUSTER III

Roles	Competency Areas
Rehabilitation Counselors Work Study/ Job Placement Personnel Community Employers Community Support Personnel	-- Compare and effectively utilize counseling techniques (client and employer) - Identify occupational resources - Conduct job analysis - Compare and contrast local employment patterns and projections - Utilize job placement and follow-up skills - Utilize market analysis skills - Conduct work role redesign - Incorporate knowledge of the world of work into placement decisions - Identify employability requirements -- Identify manpower and community resources

CLUSTER IV

Interdisciplinary Team Competency Areas

- facilitation skills for monitoring appropriate levels of communication
- decision-making skills for program planning, placement, and development
- management skills for integrating educational and rehabilitation goals
- interdisciplinary team functioning skills

Suggested Strategies for Personnel Development

Overview

By Robert N. Ianacone

In order to adequately address the recent assessment trends in vocational/special education and assist in alleviating some of the barriers that impede effective utilization of this service for handicapped youth, there is a need for a well-structured comprehensive training sequence which will create an awareness, facilitate the use, and possibly provide trained personnel to operationalize the vocational assessment process. This training should occur for (a) preservice vocational/special educators, (b) teachers within the system who are responsible for interpreting and integrating assessment results, (c) parents and advocacy groups, (d) guidance personnel and other support staff who may become involved in making programmatic decisions, and (e) administrators who are instrumental in structural, personnel, funding, and general functioning decisions. For the purpose of this monograph, the generic terms "vocational/special education (V/SE) assessment training" and "vocational/special education (V/SE) assessment trainer" (i.e., an individual, university, state, or school system designated to upgrade skills in vocational assessment) will be used to refer to the personnel development that needs to occur at all of the aforementioned levels. The use of the term "V/SE assessment training" also has other philosophical implications. This training should bring together critical areas of need in special and vocational education with the essential aspects of testing in academic and vocational skill assessment into an integrative whole. The term "training" also implies developing and, most importantly, performing tasks, skills, and competencies in order to

demonstrate mastery. This approach is most effective in developing an in-depth understanding of the vocational/special education process and will be addressed later in this section.

Strategies for personnel development are related to the training competencies and are divided into three areas which need to be integrated into a conceptual training framework to insure success in V/SE assessment training. These areas include classroom-based considerations, field-based considerations, and alternate sites for vocational assessment experiences in the vocational classroom, vocational laboratory, and at the job site. The suggested strategies in this section are derived from experience with university course and inservice offerings over the past five years in vocational/special education assessment. The author recommends that six semester hours be devoted to this offering through vocational/special education with a practitioner, field-based orientation.

Classroom-Based Considerations

Classroom-based considerations can be divided into eight areas of recommended procedures.

1. Analyzing Entry Level Competencies. As one begins to develop the intent, content, and activities for a course or any type of inservice in V/SE assessment training, it is imperative to measure the entry skills of the participants. Based on personal experience, this level of competency or even awareness is generally lower than anticipated. Unless the student has been required to perform some testing responsibilities prior to enrollment, the previous assessment exposure at the university level has typically been either a test and measurements course consisting of strictly academic tests appropriate at the elementary level, or a basic quantitative methods course which

emphasizes basic testing terminology and procedures. In either case the background of the participants is likely to be extremely varied academically, while practically nonexistent vocationally. This realization aids in focusing on the depth and breadth of the V/SE assessment training as well as underscoring the need for a comprehensive pretest to determine entry-level competency. For planning purposes the pretest should cover a number of areas, e.g., the participant's basic understanding of assessment principles, pitfalls and procedures, the participant's awareness of assessment instrumentation, and the participant's experience and competence in administering tests and utilizing test results.

One can parallel V/SE assessment training with the career education continuum. The process developmentally begins with awareness and orientation, continues with exploration and, dependent upon the skills and experiences participants bring with them, finishes with indepth skill training, integrating, interpreting, and making programmatic decisions based on the information gathered. In a single course in V/SE assessment training, only presentation of the initial stages of the process will be possible in the allotted time. Once the V/SE assessment trainer accepts this realization in training expectations, it is time to review other practices that have been effective with graduate participants.

2. Emphasizing the Comprehensive Nature of the Training Sequence. Although the greatest background and training is likely to have been in academic testing, V/SE assessment training participants have typically had little exposure to standardized academic tests and informal testing procedures appropriate at the secondary and postsecondary levels. Instrumentation used in making placement decisions by uncovering process disorders and providing

diagnostic information needs to be shared and analyzed as to its appropriateness and relevance. In addition to academic instrumentation in the areas of general intelligence, achievement, diagnostic inventories, and process disorders, there also needs to be equal, if not greater, emphasis on interest inventories, written/performance aptitude, dexterity, and vocational aptitude related to real and simulated work (Altfest, 1975). This standardized instrumentation coupled with intensive training in the use of informal testing methods and materials (Mager, 1967) should provide a comprehensive profile of the student's academic/vocational aptitudes and interests. Dependent on time and credit constraints, the scope and breadth of the course would have to vary. Thus, the variety of entry level skills and the attempt to increase the comprehensive nature of the V/SE training sequence would then lead to the remaining six recommended procedures.

3. Individualizing Training Through Competency-Based Instruction. Varying levels of sophistication in assessment can best be addressed by enabling participants to test in and out of competency areas with branching activities for those who have a greater experiential base. These branching activities can take the form of more indepth current research and product development in the areas of discriminatory testing practices, ethical testing procedures, development of training packets, design of informal test inventories, development of interest inventories that reflect local conditions, and other related project areas. This research and product development can be shared and critiqued by other participants involved in the V/SE training. These branching activities should be contracted on an individual basis specifying research/project objectives, methods of attainment, rationale, resources, timelines, and method of sharing the final product. Additionally, those

participants with experience in testing are invaluable in sharing their expertise and varying personal experiences in administering and interpreting assessment instrumentation. This activity can also be contracted and evaluated by the V/SE assessment trainer relative to the ability of the participant to effectively communicate and train his/her professional peers in a simulated inservice setting. Evaluation of the presentation should also be made by the other participants. One should caution that the V/SE assessment trainer be explicit in terms of the format of the presentation (e.g., background, test setting, item analysis, administration procedures, scoring, etc.) before the presenter presents his/her personal biases. At the same time, the presenter should be assessed as to his/her competence or ability to address the areas requested by the V/SE assessment trainer. The two basic words here are "DON'T ASSUME" (Mager, 1967) and always adequately evaluate the presenter's ability to assess.

4. Integrating Vocational and Academic Assessment. An holistic approach to assessment must be emphasized at two different levels of training. First, in order to develop a comprehensive vocational/special education assessment, information should be gathered from as many different sources as possible (e.g., interest inventories, written/performance aptitude tests, dexterity tests, work samples, situational assessment, academic achievement, diagnostic inventories, process testing and behavioral observation). Second, informal as well as formal assessment must be incorporated into the assessment process, using teacher, parent, counselor, and employer feedback in providing as many observation and skill assessment opportunities as possible. This wealth of information presents a formidable challenge even to the skilled clinician in synthesizing and integrating information as a basis for recommendations. For the V/SE assessment trainer, this task presents the most difficult and time-consuming of all competencies to master. A course could be

designed around this very competency (e.g., the ability to "pull together" all the different aspects and implications of test results into a meaningful whole upon which programmatic decisions can be made).

In order to approach this competency the V/SE assessment training participant must be familiar with many types of assessment instrumentation and the information gleaned from such assessments. Additionally, the participant must be careful to keep from overassessing and be able to address the fact that different handicapping conditions necessitate differing levels and amounts of assessment. Finally, there needs to be a distinction made between assessing for general career goals or interests, and assessing for entry into vocational skill training courses or options directly related to the employment sector. In either case, the participant must be able to translate this information and recommendations into the vocational component of the IEP for the student. All of these factors combined necessitate addressing the "pull together" competency later in the total assessment training sequence and may also minimize the depth to which this competency may be covered. One successful approach has been the use of simulated and actual anonymous cases from vocational assessment centers to develop reports reflecting various assessment and observational data collected. The V/SE assessment trainees have then compared and analyzed the different reactions to the results and rationale behind program recommendations. Initially the V/SE assessment trainer would have the participants "walk through" a series of cases to develop an interpretive framework and establish procedural guidelines. After the participants jointly respond to a case, the report and rationale submitted by the V/SE assessment specialist is then analyzed and contrasted with their responses.

Another technique is to set up a simulated team meeting where each participant assumes a role (e.g., special educator, vocational assessment specialist, diagnostician, parent, student, psychologist, administrator, etc.) to analyze and interpret findings and make programmatic decisions in an IEP setting. This activity could also be enhanced by inviting individuals who perform in these roles in the school system to present at and critique the simulated team meetings.

5. Emphasizing Field-Based "Hands On" Experiences. As is evident in some of the previous recommendations, a "learn by doing" philosophy (Batsche, 1980) should permeate the training process and appears to be an effective means to teach the intricacies and nuances of vocational/special education assessment. The number of potential sites for these activities to take place range from public and private schools which have academic testing needs and classrooms where the teacher would like additional information on the student's interest and aptitudes, to vocational assessment centers where the training participants would be involved in a number of V/SE assessment activities. These field-based opportunities will be addressed in the next section of this monograph. In general, as one gets closer to actual administration and interpretation of vocational/special education assessment, the training experience becomes more relevant and chances increase that competencies will be mastered.

6. Evaluating and Modifying Vocational Assessment Reports. Since school-based vocational assessment has its roots in the basic structure from vocational rehabilitation (Pruitt, 1977; Anderson & Dickerson, 1973), vocational assessment reports have been basically similar in format. Aside from this similarity, school-based vocational assessment reports may vary in the type of information gathered, the depth to which selective assessment is

gathered, the options recommended, and the focus/purpose of the recommendation. It is worthwhile to develop a collection of vocational assessment reports from vocational rehabilitation agencies, Goodwill, school systems, and other sources (Maryland Department of Education, 1977) to make a comparative analysis of the information gathered, the application of that information, and the basic intent of the assessment. A valuable exercise related to school-based assessment is to decide how the vocational assessment could be modified for specific populations (e.g., administrators, guidance personnel, special educators, vocational educators, parents, and students) in order to make the information presented more accessible and insure greater usage. This can be accomplished by having the V/SE assessment training participants assume the roles mentioned and, in groups, develop formats that would reflect the needs of that role.

7. Emphasizing the Rationale Behind Decision Making. The questions "what to assess," "how to assess it," and "when to assess it" are difficult to initially address and must be based on why you are using certain instrumentation and why you are making certain programmatic decisions based on the vocational assessment process. The decision about "what to assess" can be aided by analyzing the student's interest and feedback from referring sources. The method of addressing "how to assess it" is normally found in the manuals and is basically a combination of the mechanics of giving the test and good sound testing practices. The response to "when to assess" is often predetermined by county or school system priorities and sometimes simply the busing schedules. The question of "why" overrides the other three questions. Why are certain individual assessment devices administered? Why are certain combinations of assessment devices administered and sequenced? Why are certain recommendations made as a result of vocational/special education

assessment? In order to train someone to obtain a basic level of competency in this area, the V/SE trainer must question why and, in turn, the participants must question the rationale of each task and decision in the training process. Possessing a learned intrinsic "feel" predicated on personal experience and beliefs, field-based assessment specialists are invaluable in sharing their expertise in this decision-making process.

8. Using Resources. An often bypassed resource in providing V/SE assessment training involves the use of sales representatives in various training sessions. A regional or national sales representative of commercial assessment systems is frequently willing to speak to potential users and/or purchasers.

The assessment trainer should also be aware of the ongoing materials development, review, and research at the Materials Development Center, University of Wisconsin at Stout. This center provides a great wealth of resources which are essential in providing a comprehensive view of the vocational assessment process.

The preceding section has provided some critical guidelines for establishing classroom-based vocational/special education assessment training. It must be emphasized that training in this manner without a concurrent comprehensive field-based component simulates teaching in a vacuum. There needs to be specific, well coordinated "hands on" experiences to complement and supplement classroom-based instruction in vocational/special education assessment. The next section addresses how to establish a field-based learning site in order to most effectively integrate these learning experiences.

Field-Based Considerations

By Dorothea M. Hiltenbrand

In coordinating field-based V/SE assessment training, the development of on-site instructional experiences will provide a dimension that will maximize the student's learning potential, capabilities, and involvement (McKeachie, 1963). The success of this type of training requires the V/SE assessment trainer to be knowledgeable about available school and community assessment resources, and to effectively use these resources within the scope or present and future program planning. The selection of field-based training sites in industrial and community settings is a crucial factor which demands the full range of expertise of the V/SE assessment trainer.

The V/SE assessment trainer must become cognizant of the sources and types of students/clients served, evaluation philosophies, methodology, and operating procedures at each available site. Comparing and contrasting procedures, theories, and technology are essential. Differences exist within school, industrial, and vocational rehabilitative assessment sites, between urban and rural locations, and in the population being evaluated. It is this diversity of operation and practice that must become the focal point in the design of an innovative and comprehensive assessment experience.

The V/SE trainer must conduct on-site analysis to ascertain the practicability of using a site within the composition of the training program. This analysis should delineate significant features of the training site: type and size of the facility, disability group served, assessment approaches used, evaluator roles and functions, operating schedules, location, access to site, administration policies, and other site-related factors (Pruitt, 1977). Upon completion of this analysis, the V/SE trainer should identify potential use within the context of three critical variables:

1. The needs of the training sequence relative to program goals and objectives;
2. The needs of the field-based site relative to optimal training development and effectiveness; and
3. The instructional needs of the V/SE training participants relative to their present level of competency and expertise in vocational assessment

Data obtained through the site analysis and needs assessment becomes the basis to formulate strategies for incorporating the field site into the training process.

The primary aim is to develop a working relationship that will foster and facilitate the integration of reciprocal services. Demands on the time and expertise of the field-based site supervisor can be supplemented through creative project development. These projects should be individualized and adapted to the interest, experience, and skill level of each student. Each project should be reflective of individual training site needs, such as:

1. Utilization of vocational classrooms in the development of a situational assessment experience;
2. Construction and implementation of work samples to supplement commercial systems;
3. Evaluation of student (e.g., administering and scoring work samples, observing and reporting behavior, providing input during the report writing process);
4. Modification of system components to more effectively meet the needs of handicapped students;
5. Examination of community and market demands to insure a match between materials/techniques and potential training and employment sites;

6. Development of a situational assessment site within industrial settings; and
7. Development of local norms based on community employment opportunities.

Over the past four years, vocational/special education training participants at George Washington University and field-site supervisors have been involved in cooperative work sample development projects. Training participants designed work sample blueprints which included plans for materials and construction, administrative guidelines, and scoring procedures. Participants were further challenged to develop, field-test, and evaluate the quality, effectiveness, and useability of the work sample. The work samples were incorporated into the training program to:

1. Provide hands-on experience for future training participants;
2. Serve as a model for future project development; and
3. Create field-tested work samples which can be replicated by the field site.

In addition to such student projects, the V/SE assessment trainer should also be aware of the operational aspects of the training site and attempt to help supplement these needs by supplying expendable materials, loaning materials and work samples, providing consultation time, and sharing expertise and new research. This interchange of time and resources will continue to reinforce and insure ongoing use of the field sites. Additionally, program visibility, innovative project development, involvement on advisory committees, and resource exchange will enhance the working relationships of field sites and training personnel.

The field-based site supervisor should assist in designing and coordinating all aspects of the student's experience. Program purpose, goals, and

objectives should be shared with the field-based team so that they can assist in specifying:

1. Operational guidelines,
2. Types of performance behaviors,
3. Instructional experiences,
4. Structured observations and hands-on participation,
5. Sources of training materials, and
6. Amount of supervision necessary.

Through such involvement, a cooperative instructional agreement founded on specific training objectives should delineate relevant student competencies and maximize effective use of site time, space, and personnel. The agreement should include opportunities to explore assessment tools and equipment, observe the assessment process in operation, and actively participate in the total assessment process. Timelines and technical logistics (e.g., calendar of scheduled visits, length of visitations, and use of field-based supervisors' off-time for instructional input and guidance) must be clearly defined.

Role responsibilities of the field-based supervisor, the V/SE assessment trainer, and the student should be defined. When role functions and expectations are cooperatively planned and accepted on all levels, the potential for commitment to these roles is heightened. The following enumerates major role responsibilities:

<u>V/SE Assessment Trainer</u>

- o Plan course objectives and instructional sequence;
- o Initiate cooperative agreement planning;
- o Instruct in classroom;
- o Supervise and supplement on-site instruction;

- o Define, supervise, and evaluate student projects; and
- o Plan modifications for future training development.

Field-Based Site Supervisor

- o Assist in cooperative agreement planning;
- o Structure site visitation schedules;
- o Develop orientation sessions;
- o Instruct participants in center methodology, procedures, and materials;
- o Provide resource assistance to students throughout site visitations;
- o Define and consult on student projects;
- o Evaluate student projects; and
- o Plan modifications for future training development.

V/SE Trainee Participant

- o Attend and participate in designated field activities;
- o Complete quality projects and assignments;
- o Demonstrate professional conduct; and
- o Evaluate classroom and site experiences.

The development of a cooperative agreement is critical in planning and implementing a productive educational experience for V/SE assessment training participants. In additon, it is the key to the establishment of future programs, avenues of information, and sources of personnel involvement.

The V/SE assessment trainer must also design a "set of procedures to appraise a program's merit and to provide information about its goals, activities, outcomes, and impacts" (Fink and Kogecoff, 178, p. 1). In arranging

for program evaluation, the V/SE assessment trainer must be involved in (Worthen, 1974):

1. Determining what measures and standards should be used to judge performance,
2. Collecting the relevant information through measurement and other means, and
3. Applying the standard in determining merit or effectiveness.

Since evaluation is an integral part of any training program, the V/SE assessment trainer, field-based site supervisor, and training participants should provide feedback on all facets of the program and contribute recommendations for program improvement.

Conferences between the V/SE assessment trainer and field-based site supervisor should also be planned intermittently to evaluate strategies and make appropriate adjustments. Upon completion of the training sequence, evaluation data should be discussed in a culminating team conference. This meeting should focus on information relative to planning for program growth and modification, initiating future cooperative training efforts, providing accountability, assessing effectiveness of service delivery, and redefining program needs and goals for the effective delivery of vocational assessment services.

Although the effective use and establishment of field-based assessment centers is still in an infancy state, there exists strong rationale to expand vocational assessment options to a wide range of assessment settings. The next section will address this issue as well as how vocational/special education assessment training can utilize these options.

Alternative Sites and Techniques for Vocational/Special Education Assessment

By Alain E. C. Hunter

At the unsheltered work site, the success or failure of persons with or without handicaps is based on their performance on two types of occupational skills. First, there are the generic skills which are essential in the performance of tasks in a broad range of occupations, such as: communicating; problem solving; analyzing; planning; decision making; working with, getting along with, or relating to others; and diligence and/or a positive attitude toward the value of work (Sjorren, 1977). Second, there are specific skills which are fundamental to particular occupations. For example, most laundry workers should be required to reach, handle, finger, lift, and push.

Historically, the employer's assessment of the worker's performance of both sets of skills (terms vocational skills in this paper) has been the final determinant of the worker's continued employment. One may recall from the archives of vocational development, many decades before the beginning of organized assessment, master craftworkers selected their child(ren) to carry on the family trade by an intuitive, unsophisticated measure of assessment. Since the family trade or business was typically conducted in or near the abode of the family, both sets of skills (generic and specific) were developed and subsequently measured simultaneously. When the child had obtained the appropriate inventory of skills to satisfactorily contribute to the marketing of the family product, then, and only then, did the child become an accepted member of the family business.

In comparison, today's complex society has separated the craftworkers from their offspring and the development and assessment of occupational skills typically occurs in three very different settings: the home, the school, and the work site. In the home setting a kind of "kinship training" takes place

and cultural influences are infused during the acquisition of skills. In the school setting (ideally) community interests and needs are paramount in the skill development process and all segments of the educational system help to nurture an added set of skills to prepare the student for work and life. Finally, at the work site a new inventory of interfacing skills is added to the worker's repertoire which provides the employer with a worker who contributes to the development of a marketable product. These varied environments --where skills are presumed to be developed--call for some means of quality assessment in which each individual's acquired skills, essential to interfacing with subsequent levels of development, are appraised.

Assessment and Vocational Decision Making. The process of occupational skill development and assessment has become very complex for the non-handicapped learner. It can rightfully be concluded that it has become even more complex for the handicapped learner. Today, the trend appears to be that most teacher educators in vocational/special education assessment tend to rely on standardized psychological or work sample tests, or a combination of the two. Unfortunately, often overlooked are numerous alternative techniques for vocational assessment which could be employed in a number of alternate sites. These techniques use criterion-referenced measures which could be successfully administered in pre-vocational and vocational classroom/laboratories at education sites and at the business/industry work sites where products are developed or services provided.

If the teacher educators of professional assessment specialists were willing to place greater emphasis upon preparing their preservice teachers (assessment specialists) to derive and administer performance-based, criterion-referenced vocational assessment instruments, it would appear that a more "useable" instrument (cost effective, time efficient, and work effective) for

decision making would better serve most populations of handicapped learners. To prepare teachers for this role would require a comprehensive training experience in assessment to include: (a) occupational analysis of local business and industry, (b) job and task analysis of local occupations, and (c) skill analysis of tasks to be performed. Armed with this knowledge, the trained assessment specialist could learn to use the most pragmatic approach to ascertaining the learner's skill content and skill deficiencies based on his/her performance of similar or identical tasks. Some strategies which could be used during the performance assessment process are:

1. Interest assessment: The learner is exposed to jobs of the occupation by "work exploration." The learner's reported likes and dislikes of this experience coupled with written reports of interested observers would provide valuable information for entry placement.
2. Strength and limitation assessment: The learner is assigned to perform tasks which are specific to most of the job tasks which are found in the occupation. Skills which are essential for the performance of these tasks are observed in the classrooms or laboratories by teachers who would normally assess these skills in their day-to-day professional roles.

The collection of information in this assessment process would identify the occupational entry skills the learner possessed (or the number of skill deficiencies which would preclude his/her entry into the occupation), and what enjoyment was derived from the tasks performed in relation to workers who possess comparable interests and goals.

Brolin and Brolin (1979) advise assessment specialists that the learner's knowledge of the "world of work" aids the learner and the professional in the

decision-making process. However, the use of standardized tests alone in the vocational assessment process should be used with extreme care.

Negative Effects of Traditional Assessment. There are some negative effects associated with the traditional process of vocational assessment which has been academically oriented and based on observations and assessments performed by assessment specialists who measure the skills of the handicapped learner using psychological standardized tests to better "label" his/her current and potential performance. With each assessment, which at times becomes highly ritualistic and meaningless to the handicapped learner, there is a high risk of alienation. This alienation becomes a barrier to future assessment and the so-called advocate assessment specialist becomes an adversary.

Assessment and Placement: Conclusion: An assessment process should be developed which calls for the linkage between the home, the school, and the business/industry settings. The forging of such a linkage in the assessment process would be a valuable assessment in the successful vocational development of handicapped learners. It would call for members of each setting to have a role in the assessment process. In the home where kinship training takes place and initial generic skills are developed, the family unit would be provided guidelines by the educational site for assessment of "interfacing" skills which are prerequisites for entry into formal education. The educational site would provide the additional inventory of generic skills and some specific skills--based on the guidelines of the business/indutry site. In mutual cooperation, both business/industry sites and education sites would assess the handicapped learner to determine if the interfacing skills for placement at the work site have been obtained.

When the assessment process for vocational decision making is derived and matched to learner needs by more vocationally pragmatic means, then

valuable assessments will take place. For example, Evans, Hunter, Holter and Miller (1980) identified criteria that were used in the decision-making process of selecting training modes (on-the-job, classroom/laboratory or a combinaton of the two) for persons with handicaps. Many of these criteria (e.g., learner's abilities and aptitudes, disabilities, preferred learning modes, prior experience) should be considered in the process of making decisions in assessment. The process advocated here would call for more research in this area.

In conclusion, the foundation of the assessment process outlined here would be pragmatic, performance-based, and criterion-referenced vocational assessment performed by a greater number of interested persons in a greater number of settings, rather than continued reliance on standardized psychological or work sample test assessment performed by one type of specialist in one type of setting.

Model Delivery of Vocational Assessment Services

Arlington Career Center Vocational Assessment Center/Process

By William F. Sullivan

Vocational assessment for handicapped students does make a difference. Since the assessment program began at the Arlington Career Center during the 1979/80 school year. There have been positive results of a structured, systematic assessment process upon the students and upon their career decision-making skills. Equally significant has been the positive attitudinal changes toward the students that have occurred in the parents, the special education teachers who refer the students to the assessment program, and equally important, the career center's vocational skills teachers.

Prior to the establishment of this vocational assessment program, handicapped high school students were frequently referred or assigned to the regular (as opposed to self-contained or special vocational training classes) skill training classes or competitive employment situations with inadequate information regarding the student's match for that particular training or placement opportunity. Often the placement was recommended simply as a result of a student's or parent's expressed interest in a particular area or, in some cases, because of the availability of a course to fit within a desired block of time on the student's course schedule. In far too many cases, very little consideration was given to the student's full range of vocational interests, aptitudes, and behaviors, and how these interact with each other in order to assist the student in effective career decision making. In addition, while an IEP had been developed for the student's academic program, the vocational component was inadequate or missing because the career center

staff had very little input into the IEP and, consequently, little knowledge regarding a particular student's vocational strengths and/or weaknesses. These breaches of appropriate placement considerations very often resulted in the student rapidly losing interest in the skill course or in student failure due to lack of motivation and effort. In addition, the vocational skill teacher and support staff seemed to feel inadequate in working with handicapped students and often questioned the appropriateness of the placement of handicapped students into regular vocational training programs.

In establishing the vocational assessment program, specific strategies have been developed and implemented to counter these placement inadequacies of the past and to provide a framework in which systematic and cohesive vocational planning can take place. One of these strategies has been the involvement of the student's special education teachers in the selection of students for the vocational assessment program. This procedure has forced the teachers to focus upon student strengths and weaknesses relating to vocational skill training and to delineate student readiness for planning of an appropriate vocational program. Perhaps the most important strategy that has been developed is the active involvement of the students themselves in the assessment process.

Prior to the start of the assessment, the staff provides the students with an intensive orientation to the process. This gives the students a framework in which they can ask questions, obtain an understanding of the purpose for vocational assessment, release any tension, and relieve anxiety. The orientation also assists the students in becoming comfortable with the assessment staff and establishes an atmosphere under which an optimum level of performance can be achieved. Throughout the assessment period, students are asked to provide feedback about all of the work samples. Their reactions

are systematically recorded after each task is completed. Particular trends are identified, and the selection of work samples becomes more individualized and dependent upon the student's manifest interest and level of demonstrated ablity.

During the final phase of a student's assessment, the student actively participates in a feedback session in which the results of the student's performance are explained. Also, the outline of a vocational strategy is developed in which the student can share. The feedback session stresses the student's demonstrated strengths and how these strengths may be applied in a particular vocational training program. Thus, the involvement of the student's academic teacher and the continuous input of the student in the assessment process creates a more favorable climate in which appropriate vocational placement decisions can be determined.

A third element of strategy fostered through the assessment program has been the active involvement of the parents of the handicapped students. Consequently, through the assessment program, a team approach emerges in which parent, teacher, vocational educators, vocational evaluator, and the student share in the development of a vocational plan. This team becomes responsible for formulating the vocational components of the IEP. The assessment program becomes the core of this planning and forms the basis for identifying the goals, objectives, and strategies necessary to implement the most appropriate vocational program.

The formation of the team evolves during the post-vocational assessment conference. The conference participants include the student, special education teacher/monitor, parents or guardians, vocational evaluator, and vocational support team coordinator. Other participants may include the guidance counselor and/or significant others who may be involved in some facet of the

student's program. The post-assessment conference has as its main objective the formulation and implementation of a comprehensive vocational plan. It is at this conference that vocational strengths and weaknesses are identified. In addition, the specific behaviors that the student manifested while undergoing the assessment are also discussed and related to the student's overall performance. Examples of the vocational strengths and weaknesses may include clerical skill, fine and gross motor coordination, ability to use tools, and spatial skills related to following diagrams and assembling objects using two-dimensional diagrams. Specific behavioral concerns that are discussed may relate to attendance, frustration tolerance, attention to task, organizational skills, peer and staff interaction, as well as other significant behavioral factors.

Based on the vocational data that is presented, specific placement recommendations are outlined. These placement recommendations may take several forms. They may involve totally mainstreamed vocational courses, self-contained vocational programs, or, in some cases, a combination of both. In any event, the programs are individualized and attempt to place the handicapped student in the least restrictive vocational setting.

In some cases, the data may indicate that a student demonstrated particularly well defined aptitude in a specific skill area, and that his/her vocational behavioral performance was appropriate for eventual success. In that case, the recommendation from the team would be to enroll the student in that training area. In another case, it may be determined that the student, while demonstrating some significant aptitudes, did not present any clearly defined or developed vocational interests. Consequently, the team may suggest that the student be enrolled in some general vocational courses related to his/her aptitudes at the home high school. As an alternative to this example, the

team may recommend that the student participate in a modified career exploration program allowing the student to explore several career fields for an extended period of time in order to more clearly define areas of interest.

While the thrust of the post-assessment conference is to recommend placements in regular vocational settings, it is recognized that in many cases they are not the most appropriate placements. There are a number of situations where handicapped students may have exhibited, during the assessment process, vocational behaviors and learning styles which warrant more structured, self-contained vocational environments. Consequently, for many handicapped students, the assessment conference may indicate that a well-structured, supportive work adjustment program may be the program of choice. Such a placement would allow the student to focus on the acquisition of the essential employability behaviors necessary for vocational success while developing and refining specific vocational aptitudes demonstrated during the assessment process. The work adjustment program is, therefore, transitional in nature, allowing the student to proceed to another least restrictive vocational setting once he/she has developed the requisite employability attitudes and behaviors.

In many cases, the recommended program may involve a combination of academic courses under the resource model combined with community work experiences. Such a recommended placement affords the student the opportunity to explore different career fields outside a school setting while capitalizing on areas of tested interest and aptitudes. The combination of academic support subjects with work experiences provides the handicapped student with the needed supportive structure, plus the least restrictive work settings in the community.

Obviously the participants at the post-assessment conference have a wide array of program options available to them as a result of the assessment data. Likewise once the specific vocational program has been recommended and selected, the data from the assessment provides a powerful resource for developing the specific goals and objectives for the IEP. One special education teacher has commented that the data from the assessment provides her with more useful information on students than do most of their psychological reports. To be sure, the assessment report provides a ready reference of the specific areas of concern and specific strategies to remediate the areas of difficulty or compensate for them and develop appropriate alternative strategies. These strategies may take the form of modification of curriculum in specific skill training areas through use of study guides or contracting, or may involve additional emphasis on specific learning modalities of students which the assessment uncovered. The information developed from the vocational assessment report has also been used to identify essential academic skill competencies necessary for success in a particular vocational field. These skill competencies can be indicated on the vocational component of the IEP as objectives, and can form the basis of academic support subject areas such as math or reading development. In addition, listing the required academic skill competencies on the IEP directs both the vocational educator and the special education academic teacher to combine their respective resources and share in the responsibility for implementing the IEP provision, assisting the handicapped student to achieve vocational success.

The recommendations stemming from the vocational assessment program and the program implementation have been an integral part of the vocational services to handicapped students at the career center for the past 12 months. Last year 76 handicapped students, spanning all categories of handicapping

conditions, completed the full assessment process. Seventy percent of those students have successfully completed, either in full or in part, a vocational program which was developed as a result of the vocational assessment process. In most cases, the students are continuing with the skill training program, or are advancing to another level of vocational training at the center or at their home high school. It is hoped that the students who complete a full assessment program this year will share equal success.

A major part of the success that has been enjoyed through this vocational assessment program has been the fact that vocational recommendations at the career center have been implemented, whether they involve regular vocational programming in least restrictive settings or special vocational programs. This was the underlying premise upon which the vocational assessment program was established and implemented. If it were not for this premise, one could seriously question the purposes of any vocational assessment process. Fortunately, the career center is administered by individuals who share this concern and staffed by concerned vocational educators and teachers who provide the framework in which the vocational program options for handicapped students can be implemented.

Montgomery County Public Schools--Classroom-Based Vocational Pre-Assessment Program

By Lois R. Rothkopf

The Vocational Assessment Center in Montgomery County, Maryland, originated as a result of the need to facilitate and improve the development of appropriate vocational goals and program placements for secondary-level handicapped students. Assessing handicapped students for appropriate vocational training opportunities entails the utilization of vocational assessment

systems, methodologies, and data to ascertain vocational abilities and potential. It is important to realize that vocational assessment alone has limited use for students unless the components of vocational counseling, career development, vocational training, and job placement are included in the total career process.

The Process. The Vocational Assessment Center is federally funded under P.L. 94-142. The center, staffed by two vocational assessment teachers and an aide, provides individualized assessments for groups of six students over a period of five to seven days. Handicapped students participating in the center were identified as learning disabled, mildly retarded, and more recently, emotionally impaired.

The vocational assessment process consists of the following components (Maryland State Department of Education, 1977):

1. Referral
2. Student orientation
3. Assessment
    a. Work sampling
    b. Tests
        (1) Academic achievement
        (2) Interest surveys
        (3) Dexterity tests
    c. Occupational information
    d. Critical observation
    e. Personal interview
4. Written report
5. SARD - School admission, review, and dismissal
6. Program implementation and follow-up

The Goals and Objectives. The Vocational Assessment Center is designed to provide students with the opportunity to explore their vocational interests, aptitudes, and abilities. Under the umbrella goal, the major objectives of the center are (Maryland State Department of Education, 1977):

1. To assess the vocational potential of selected handicapped students.
    a. To use practical work samples in order to evaluate manipulative skills, work behaviors, attitudes, and tolerances;
    b. To use a series of dexterity tests and interest inventories which would assess the individual's personal interests, manipulative skills, vocational potential, physical and mental factors, and adjustment to achievement levels;
    c. To help students develop awareness of the physical, educational, academic, and training requirements of various occupational areas, particularly those in which he/she has the aptitude, interests, preferences, manual dexterity, and occupational potential to function successfully;
    d. To help students develop awareness of appropriate work behaviors and attitudes which are expected in the selected occupational area; and
    e. To assist students in obtaining a good self-image and awareness of vocational interests, aptitudes, and potentials.
2. To provide assessment information on which placement of students in programs designed to maximize their potential in areas of work adjustment, vocational development, work experience, and/or vocational training can be based.
    a. To provide accurate data and relevant information from the vocational assessment to persons involved with the student; and

b. To recommend future vocational curricula/educational programs to coincide with the student's educational needs reflecting personal preferences, potentials, abilities, and limitations.

3. To orient teachers, counselors, administrators, parents and students about the V.A.C.

   a. To disseminate information about the V.A.C.;

   b. To conduct inservice training to professionals involved in the vocational assessment process; and

   c. To inform parents and students about the V.A.C.

Conclusions and Recommendations. The Vocational Assessment Center has served as a catalyst to encourage handicapped students and their teachers and parents to explore appropriate pre-vocational and vocational options.

However, the Vocational Assessment Center has been confronted with certain barriers to comprehensive services:

-- The center serves 18 special programs in 17 high schools. Testing small groups of students for five to seven days does not allow sufficient time to test the required number of students.

-- The size, expansive geographical layout of the county, and time required to complete the assessment process compounds efforts to service the number of students needing vocational assessment.

-- Report recommendations have been underutilized, resulting in teachers being virtually unfamiliar with the scope of available vocational programs.

-- Vocational assessment staff has encountered difficulty with teachers and parents regarding the length of time students were absent from class.

In order to address these concerns, Montgomery County expanded the vocational assessment model to include a vocational pre-assessment component which would be conducted by teachers in the classroom. (See Figure 1) This pre-assessment involved teachers in the administration and interpretation of interest surveys and pre-vocational assessment instrumentation.

Figure 1

VOCATIONAL PRE-ASSESSMENT: AN INNOVATIVE APPROACH

The Vocational Pre-Assessment Tools

After careful review of available vocational assessment systems that could be administered to groups of students in one to two days, the following items were selected to be included in a vocational pre-assessment kit:

-- T.A.P. Talent Assessment Program (10 hands-on subtests)

-- P.I.E.S. Picture Interest Exploration Survey

-- W.R.I.O.T. Wide Range Interest and Opinion Test

-- Occupational Outlook Handbook

-- The AEL Career Decision Making Program, The Worker Trait-Group Guide

-- The World of Work

Eight of these vocational pre-assessment kits were developed to rotate between 18 special education programs.

The Process

The following outlines the vocational pre-assessment process, which includes test administration and follow-through procedures (Montgomery County Public Schools, 1981):

1. Identify students for pre-assessment
2. Administer vocational pre-assessment
3. Develop a vocational pre-assessment profile (see Appendix A)
4. Initiate assessment planning conference
    a. Include student, parents, counselors, and any other appropriate school personnel in conference.
    b. Review vocational assessment results as noted on profile.
    c. Obtain parent input concerning career and vocational goals.
    d. Refer for extensive vocational assessment.
5. Explore options for pre-vocational and vocational and career programming
    a. Refer to Suggested Pre-vocational and Vocational and Career Recommendations (Appendix B).
    b. Consider in-program options.
    c. Consider in-school options.
    d. Consider out-of-school options.

Training

The implementation of the vocational pre-assessment model required several months of planning to identify and develop projected inservice and follow-up activities for the classroom teachers. The Vocational Assessment Inservice Committee was formed by selecting persons from the following services:

1. Office of Continuum Education, Division of Special Education;
2. Office of Instruction and Program Development, Division of Career and Vocational Education; and
3. Office of the Deputy Superintendent, Guidance/Alternatives Section.

The Vocational Assessment Inservice Committee played a key role in the successful creation of the vocational pre-assessment model. The committee designed training activities and a workshop booklet for the inservice. The workshop booklet contained procedural guidelines for teachers to record and interpret pre-vocational assessment data. Among the most widely used portions of the workshop booklet have been the evaluation summary and suggested pre-vocational, vocational, and career recommendations.

Participating schools were represented by special education teachers, vocational support team staff, and selected others who participated in the following workshop activities:

1. Prior to receiving indepth instruction on the administration, scoring, and interpretation of the vocational pre-assessment package, each participant was administered the pre-assessment device and related their self analysis of the data to the assessment process.
2. Interpreted the results of the vocational pre-assessment instrumentation using appropriate resource guides and materials.
3. Completed, compared, and critiqued an assessment summary based on the results of an individual vocational pre-assessment.

Role of the Vocational Assessment Center

Students engaged in the vocational pre-assessment are recommended to the Vocational Assessment Center when the following occurs (Montgomery County Public Schools, 1981):

1. The T.A.P., P.I.E.S. and W.R.I.O.T. result in little or no correlation between the student's interest and aptitude;
2. Limited interest profiles result from both P.I.E.S. and W.R.I.O.T.; or
3. The student experiences great difficulty in responding to the T.A.P.

The vocational assessment teacher also serves as an itinerant assessment resource assisting teachers in the administration, scoring, and interpretation of the vocational pre-assessment. In addition, the vocational assessment teacher aids in the development of appropriate pre-vocational and vocational IEP objectives.

Benefits of Teacher Administered Vocational Pre-Assessment

1. Enables teachers to better consider the student's program needs in one or more of the following areas (Montgomery County Public Schools, 1981):
    a. Pre-vocational education competencies within special class
    b. Pre-vocational education within general education program
    c. Work experience
        (1) Rotating work
        (2) In-school work
        (3) Community-based work
    d. Training
        (1) Vocational
        (2) Vocational with remedial support services
        (3) On-the-job training or alternative training options
    e. Career education
    f. Vocational/career counseling
    g. Referral to department of rehabilitation
    h. Remediation of academic skills
    i. Referral for further testing (i.e., hearing test)
    j. Referral to vocational assessment center
2. Affords teachers the opportunity to interact and observe students in a non-academic capacity

3. Initiates the development and implementation of career, vocational, and pre-vocational IEP goals and objectives
4. Assists teachers in identifying the need for alternative secondary special education and vocational training options
5. Provides data to base the development and/or modification of pre-vocational and career-related curriculum and teaching materials.

Benefits of Vocational Pre-Assessment for Students

1. Experiences hands-on activities in the classroom
2. Promotes interest in career opportunities
3. Initiates the investigation of available vocational training programs
4. Assists the student to identify more realistic career goals
5. Allows student to better understand his/her skills and limitations
6. Aids student in selecting appropriate and relevant pre-vocational, work experience, and vocational skill training options.

Recommendations

The success of the vocational pre-assessment is based on the cooperative planning efforts of vocational educators, special educators, and guidance counselors. Inservice training also needs to be role specific (i.e., vocational teachers need more information about teaching handicapped students while counselors need to become more aware of occupational options available in the public and private sectors).

It is recommended that the vocational pre-assessment component be implemented at the junior high school level since many of these students need to consider career options at an earlier age. Depending on the individual student, the Vocational Assessment Center could then be used at both the junior and senior high school levels.

Modification of the vocational pre-assessment instrumentation would be necessary for students functioning at different levels as well as be expanded to service all occupational clusters represented in the local community.

Summary

This monograph has addressed some of the critical issues, legislation, training competencies, and teaching strategies in vocational/special education assessment training. The intent is to provide a structural basis from which teacher and inservice educators can supplement and expand on an individual and system training effort. This publication has also pulled together, through research and specific assessment training experiences, some of the common pitfalls in providing school-based vocational assessment and personnel training in vocational/special education assessment. Hopefully, the information presented will provide a common starting point from which to improve the provision of vocational/special education assessment services to handicapped youths.

The final section of the monograph delineated two exemplary models for the delivery of vocational assessment services. The first model program, Arlington Career Center/Vocational Assessment Center, focused on the process by which vocational assessment is utilized and integrated into the system in a school-based vocational assessment center. The second model program, Montgomery County Public Schools/Vocational Assessment Center, focused on expanding vocational assessment into the classroom in an effort to further integrate the assessment process and obtain crucial pre-assessment information.

References

Altfest, M. Vocational education for students with special needs. Ft. Collins, Colorado: Colorado State University, June, 1975.

Andrew, J. I., & Dickerson, L. R. (Eds.) Vocational evaluation: A resource manual. Menomonie, Wisconsin: University of Wisconsin-Stout, Department of Rehabilitation and Manpower Services, Research and Training Center, 1973.

Batsche, C. Personnel preparation for serving special vocational needs populations. In G. D. Meers (Ed.), Handbook of special vocational needs education. Maryland: Aspen Systems Corporation, 1980.

Bowe, F. Handicapping America: Barriers to disabled people. New York: Harper and Row, 1978.

Bowe, F. Rehabilitating America. New York: Harper and Row, 1980.

Brolin, D. E. (Ed.). Life centered career education: A competency-based approach. Reston, Virginia: The Council for Exceptional Children, 1978.

Brolin, D. E. Vocational preparation of retarded citizens. Columbus, Ohio: Charles E. Merrill Publishing Co., 1976.

Brolin, J. S., & Brolin, D. E. Vocational education for special students. In D. Collinan & M. H. Epstein (Eds.), Special education for adolescents: Issues and perspectives. Columbus, Ohio: Charles E. Merrill Publishing, 1979.

Brock, R. J. State of the art 1977-1979, longitudinal study: Preparing vocational and special education personnel to work with special needs students. Menomonie, Wisconsin: University of Wisconsin-Stout, 1979.

Coffey, D., Hansen, G., Menz, G., & Coker, C. Vocational evaluator role and function as perceived by practitioners and educators. Menomonie, Wisconsin: University of Wisconsin-Stout, Vocational Rehabilitation Institute, Research and Training Center No. 2, 1978.

Conley, R. W. The economics of mental retardation. Baltimore: John Hopkins University Press, 1974.

Directory and program information for the OSE vocational/career education projects 1979-1980. Urbana-Champaign: University of Illinois, Leadership Training Institute/Vocational and Special Education, 1980.

Division of Vocational/Technical Education, Maryland State Department of Education. Vocational evaluation in Maryland public schools: A model guide for student assessment. Baltimore, Maryland: Author, 1977.

Evans, R. N., Hunter, A., Holter, A., & Miller, J. Identification and validation of criteria used for determining the best training setting for persons with handicaps. (Tech. Rep. DAVTE, IOE, R-31-20-X-0275-164). Urbana-Champaign: University of Illinois, Bureau of Educational Research, June 1980.

Fink, A., & Kosecoff, J. An evaluation primer. Washington, D.C.: Capitol Publications, Inc., 1978.

Howard, N. Puzzled about education for special needs students? Madison: University of Wisconsin, Vocational Studies Center, 1980.

Kapes, J. T., & Greenwood, K. L. Walking the tightrope of student selection. VocEd, 1979, 54(7), 24-27.

Lamkin, Jill S. Getting started: Career education activities for exceptional students (K-9). Reston, Virginia: The Council for Exceptional Children, 1980.

Levitan, S., & Taggart, T. Jobs for the disabled. Washington, D. C.: George Washington University, Center for Manpower Policy Studies, 1976.

Mager, R. F., & Beach, K. M. Developing vocational instruction. Belmont, California: Fearon-Pitman Publishers, Inc., 1967.

Maryland Department of Education. Vocational evaluation in Maryland public schools: A model guide for student assessment. Annapolis: Maryland Department of Education, 1977.

McKeachie, W. J. Research on teaching at the college and university level. In N. L. Gage (Ed.), Handbook of research on teaching. Chicago: Rand McNally & Company, 1963.

Merriam, V., Byers, K., & Clive, D. Descriptions and abstracts of regular inservice projects (REGI). Bloomington: Indiana University, National Inservice Network, 1981.

Montgomery County Public Schools. Vocational assessment for handicapped students workshop booklet, Maryland, November 6-7, 1980.

Montgomery County Public Schools. Pilot vocational assessment center for selected handicapped students. Maryland: Author, 1980.

Office of Civil Rights. Vocational education programs--guidelines for eliminating discrimination and denial of services on the basis of race, color, national origin, sex, and handicap. Federal Register, March 21, 1979, 44(56).

Prince George's County Public Schools. The everyday skills program. Maryland: Author, 1977.

Progress toward a free appropriate public education: A report to Congress on the implementation of P. L. 94-142. HEW Publication No. (OE) 79-05003. Washington, D. C.: Department of Health, Education, and Welfare, January 1979, p. 65.

Pruitt, W. A. Vocational work evaluation. Menomonie, Wisconsin: Walt Pruitt Associates, 1977.

Public Law 88-352. Civil rights act of 1964. July 2, 1964.

Public Law 92-318. Education amendments of 1972 (Title IX--Prohibition of sex discrimination, Section 901). June 23, 1972.

Public Law 93-112. Rehabilitation act of 1973. September 26, 1973.

Razeghi, J. A. Advice to special and vocational educators: How to begin working together. In J. A. Razeghi & F. G. Bowe (Eds.), Resource guide for consumer consultants in career education and vocational education. Washington, D. C.: American Coalition of Citizens with Disabilities, Inc., 1981.

Sitlington, P. L. Vocational assessment training of the handicapped. Focus on Exceptional Children, 1979, 12.

Sitlington, P. L. The assessment process as a component of career education. In G. M. Clark & W. J. White (Eds.), Career education for the handicapped: Current perspectives for teachers. Pennsylvania: Education Resource Center, 1980.

Sjogren, D. D. Occupationally-transferable skills and characteristics: Review of literature and research (Information Series No. 105). Columbus, Ohio: National Center for Research in Vocational Education, March 1977.

Stodden, R. A. Planning vocational assessment activities within an educational setting: An interdisciplinary focus with handicapped students. In R. A. Stodden (Ed.), Vocational assessment of the handicapped. Urbana-Champaign: University of Illinois, Leadership Training Institute/ Vocational and Special Education, 1981.

Stodden, R. A. Vocational assessment of special needs individuals: Project final report, phase II. Boston: Commonwealth of Massachusetts, Division of Occupational Education, 1980.

Stodden, R. A., Casale, J., & Ianacone, R. N. Career/vocational evaluation of the handicapped individual: A multidisciplinary school based model. A presentation at the International Convention of the Council for Exceptional Children, Atlanta, Georgia, 1977.

Stodden, R. A., Casale, J., & Schwartz, S. E. Work evaluation and the mentally retarded: Review and recommendations. Mental Retardation, 1977, 15, 25-29.

Stodden, R. A., & Ianacone, R. N. Career/vocational assessment of the special needs individual: A conceptual model. Exceptional Children, 1981, 47(8), 600-609.

Stodden, R. A., Ianacone, R. N., & Lazar, A. L. Occupational interests and mentally retarded people: Review and recommendations. Mental Retardation, 1979, 17(6), 294-299.

Tesolowski, D. G., & Wichowski, C. P. The Florida public occupational education admission standards and practices study. Paper presented at the meeting of the American Educational Research Association, Los Angeles, April 1981. (ERIC Document Reproduction Service No. ED 199 437)

Worthen, E. R. A look at the mosaic of education evaluation and accountability. Northwest Regional Laboratory Working Paper No. 3. Portland, Oregon: Northwest Regional Laboratory, 1974.

Appendices

Appendix A

Evaluation Summary: Vocational Assessment Profile

Student Name: _____ D.O.B. _____ Age: _____

School: _____ Program: _____

Evaluation Dates: _____

I. Interest survey results:

List the priority interest areas that result from the Picture Interest Exploration Survey and/or the Wide Range Interest and Option Test. Include both tests in the cases where both were administered.

P.I.E.S.	W.R.I.O.T.
Interest areas:	Interest areas:
1. _____	1. _____
2. _____	2. _____
3. _____	3. _____
4. _____	4. _____
5. _____	5. _____

II. T.A.P. test results:

Attach the Assessment of Original Characteristics.

III. Identified occupational areas that resulted from the TAP number configuration.

IV. Observations: Complete and attach Vocational Assessment Observation Checklist

Adapted from Vocational Assessment for Handicapped Students Workshop Booklet, Nov. 6-7, 1980, Montgomery County Public Schools, MD.

V. Identified occupational cluster areas and job titles that appear in both the students interest and aptitude areas. Utilize the resource books in selecting the appropriate occupational cluster areas and job titles.

VI. Student comments:

VII. Summary and recommendations:

A. Interpretation of tests identify the following occupational areas and/or job titles as areas for the student to consider:

1.
2.
3.
4.

B. Check the appropriate line based on test results and observations. Utilize Suggested Pre-vocational, Vocational and Career Recommendations.

___ pre-vocational education competencies within special class

___ pre-vocational education within general education program

___ work experience

___ training

___ career education

___ vocational/career counseling

___ referral to Department of Rehabilitation

___ referral to Vocational Assessment Center

_____
Teacher Signature

_____
Title

Montgomery County Public Schools
Office of Continuum Education
Department of School-Based Programs
Division of Special Education

Appendix B

Suggested Prevocational, Vocational, and Career Recommendations

I. Pre-vocational education competencies within special class (Prince George's County Public Schools 1977)

a. Managing finances
b. Mobility
c. Personal and family maintenance
d. Housing
e. Consumerism
f. Communications
g. Worker
h. Leisure time
i. Citizenship

II. Pre-vocational education: Within general school program

a. Industrial Arts
b. Business and Office Education
c. Home Economics
d. Other available non-vocational courses

III. Work experience

a. In-school work program
b. Rotating work experiences in the community and/or school
c. Work experience in the community
d. Work experience programs
    1. C.O.E. (Cooperative Office Experience)
    2. C.W.E. (Cooperative Work Experience)
    3. D.E. (Distributive Education)

Adapted from Vocational Assessment for Handicapped Students Workshop Booklet Nov. 6-7, 1980, Montgomery County Public Schools

4. W.O.C. (Work Oriented Curriculum)

IV. Training

a. Vocational training

b. Vocational training with vocational support services

c. On-the-job training

V. Career education (Lamkin 1980)

a. Incorporate the major career education elements of self, society, and lifestyle

b. Provide career awareness, orientation and exploration activities:

1. Clarifying self-concept
2. Recognizing responsibility for tentative career planning
3. Developing individual inquiry and problem solving skills
4. Developing socially responsible behaviors appropriate to a working environment
5. Understanding of basic concepts of economics as they relate to careers, society, and lifestyle

c. Provide career preparation activities:

1. Clarifying self-concept
2. Assuming responsibility for implementation of career plan
3. Applying problem-solving skills
4. Understanding the dynamics of group behavior in a work situation
5. Acquiring the discipline of work
6. Implementing career plans and objectives

VI. Vocational/career counseling (Brolin 1978)

a. Develop four year plan

b. Identify available programs

c. Assist in the selection of appropriate programs and goals

d. Identify sources of occupational information

e. Identify major occupational needs

f. Identify requirements of appropriate and available jobs

g. Make realistic occupational choices

h. Guide student into the transition from career exploration to the career preparation level

VII. Referral to Vocational Rehabilitation Department

VIII. Referral to Vocational Assessment Center

Montgomery County Public Schools
Office of Continuum Education
Department of School-Based Programs
Division of Special Education
Fall 1980

Appendix C

Advantages and Disadvantages of Using Major Commercial Systems With Individuals Who Are Handicapped

Vocational Information and Evaluation Work Samples (VIEWS)

Advantages

- developed for mentally retarded populations
- task progression from simple to complex
- allows for training session prior to task
- unit mobility
- evaluator training required
- readministration possible
- system is criterion referenced
- addresses and defines work behaviors
- ample time element for task completion
- allows for diverse behavioral observations

Disadvantages

- manual difficult to follow
- expensive
- system must be purchased in its entirety
- modification is discouraged
- in some tasks time element tends to be overly generous
- evaluator must recyle some parts for next client
- 25-35 hours administration time for complete system

Philadelphia Jewish Employment and Vocational Service Work Sample System (JEVS)

Advantages

- easily administered
- well defined scoring procedures
- unit may be administered in any sequence
- allows for diverse behavioral observations
- unit mobility
- task progression from simple to complex
- evaluator training required
- unit adaptability
- unit durability
- well organized manual
- correspondence with Dictionary Occupational Title
- tests tolerance for repetition
- continuous monitoring unnecessary

Disadvantages

- lack of resemblance to real work tasks
- expensive
- system must be purchased in its entirety
- evaluator must recycle parts for next client
- tasks tend to be tedious
- unrealistic scoring for certain populations
- unsuitable for career exploration
- time consuming to administer
- clients penalized for questions asked
- unit parts easily misplaced
- inadequate client instructions for some populations
- does not allow for training sessions prior to task

Singer Vocational Education System

Advantages

- highly visual
- individualized, self-paced instruction
- corresponds to specific job clusters
- vocational exploration oriented
- unit attractiveness
- updated
- occupational information provided
- self-contained
- wide range of activities
- lockable work stations
- continuous client monitoring unnecessary
- end product allows for client feedback
- units can be purchased separately

Disadvantages

- expensive
- some stereotyping of work roles
- requires considerable amount of concentration and memory
- difficulty to reverse tape and pictures simultaneously
- limited amount of work space
- complicated system set-up
- tasks require a considerable amount of manual dexterity
- instruction pace cannot be controlled
- tasks tend to be lengthy and tedious
- some unit items difficult to replace
- insufficient vocabulary training and development

MICROTOWER (ICD Rehabilitation and Research Center)

Advantages

- allows for training session prior to task
- group administration possible
- career information component provided
- individually packaged
- well-organized manuals
- multi-sensory instruction
- well-structured final report format
- unit mobility
- unit adaptability
- end product allows for client feedback
- expendable materials easily replaced
- requires small amount of space
- provides overall aptitude file
- self-report form for client included
- 19 group norms available
- units can be purchased separately

Disadvantages

- lack of defined behavioral terminology
- prior skill with small tools may be necessary
- time-consuming to administer
- heavy emphasis on auditory discrimination
- some handtool use could prove dangerous
- tape tends to be monotonous and tedious
- group administration may contribute to competition among clients

VALPAR Component Work Sample Series

Advantages

- unit durability
- task progression from simple to complex
- expendable materials easily replaced
- well-organized manuals
- several norm populations available
- units can be purchased separately
- emphasis not placed on academic skill requirements
- allows for training session prior to task
- units may be administered in any sequence
- observation terminology defined
- administration procedures specified in detail
- readministration possible
- unit attractiveness
- based on 17 worker characteristics
- self-contained
- unit adaptability
- well-defined scoring procedures
- recycled parts prepare task for next client
- based on trait-factor approach

Disadvantages

- lack of resemblance to real work tasks
- evaluator training not required
- time elements tend to be overly generous
- not suitable for career exploration
- lack of occupational information supplied to the client
- mobility difficult due to unit weight

PROJECT DISCOVERY Career Exploration System

Advantages

- units can be purchased separately
- reasonable cost
- lower level reading edition available
- provides for vocabulary development and training
- individualized instruction
- audio-visuals included with some units
- graphics enhance unit attractiveness
- career information component provided
- vocational exploration oriented
- unit mobility
- unit adaptability
- group administration possible

Disadvantages

- heavy emphasis on reading skills
- instruction format unclear
- manual difficult to follow
- storage problem
- lack of client feedback
- some units are lengthy
- time consuming to administer
- evaluator responsible for supplying many unit items prior to system use

Comprehensive Occupational Assessment Training System (COATS)

Advantages

- broad in its conceptualization
- units can be purchased separately
- self-paced instruction
- unit mobility
- units may be administered in any sequence
- computer-scored
- group administration possible
- correspondence to Dictionary of Occupational Titles
- cross-references scoring

Disadvantages

- excessive orientation toward paperwork tasks
- continuous client monitoring may be necessary
- eighth grade reading level necessary for use of student handbooks
- expensive
- some units are lengthy
- time consuming
- delays in obtaining assessment results
- tapes must be recycled for repetition of instruction

NOTA BENE:

It must be stressed that these comments are subjective student responses to "hands on" field work combined with system based vocational assessment specialist responses to each system. Additionally, a majority of the systems reviewed were not originally designed to be used with handicapped populations; thus, the responses primarily reflect their generalizability and adaptability.

Developed by vocational/special education graduate students at George Washington University.